

IN THE CLAIMS

Please cancel Claims 9-14 without prejudice or disclaimer of subject matter.

Please amend Claims 1-8 to read as follows.

1. (Currently Amended) A driving patterning method comprising the steps of:
for preparing a liquid discharge head ~~including:~~ comprising a discharge port for discharging ~~liquid;~~ liquid, a pressure-applying portion communicating with the discharge port, for applying a pressure for discharge to ~~the liquid;~~ liquid, and a ~~pressure-generating~~ pressure-generating device for generating the ~~pressure,~~ the method comprising a step of pressure; and applying liquid to a liquid-receiving member supported on a support by driving the liquid discharge head,

wherein said step of applying liquid comprises a step of applying a first discharge pulse for discharging liquid and a second discharge pulse for discharging liquid to the ~~pressure-generating~~ pressure-generating device in a sequential manner in response to an instruction of one-dot discharge, and

wherein ~~the~~ a pulse width T_1 of the first discharge pulse, ~~the~~ a pulse width T_2 of the second discharge pulse, and a rest time K_{12} between the first discharge pulse and the second discharge pulse are determined so that a first amount of liquid discharged in response to the first discharge pulse has a volume equal to or greater than that of a second amount of liquid discharged in response to the second discharge pulse and ~~the~~ a discharge speed of the first amount of liquid is lower than ~~the~~ a discharge speed of the second amount of liquid.

2. (Currently Amended) A ~~driving patterning~~ method for a liquid discharge head according to claim 1, wherein the pulse width T_1 of the first discharge pulse, the pulse width T_2 of the second discharge pulse, and the rest time K_{12} are determined based on the a hydrodynamic resonant frequency of the liquid discharge head.

3. (Currently Amended) A ~~driving patterning~~ method for comprising the steps of:
preparing a liquid discharge head including: comprising a discharge port for
discharging liquid; liquid, a pressure-applying portion communicating with the discharge port,
for applying a pressure for discharge to the liquid; liquid, and a pressure-generating
pressure-generating device for generating the pressure, the method comprising pressure; and
applying liquid to a liquid-receiving member supported on a support by driving
the liquid discharge head,

wherein said step of applying liquid comprises a step of applying a first discharge
pulse for discharging liquid and a second discharge pulse for discharging liquid to the pressure
generating pressure-generating device in a sequential manner in response to an instruction of
one-dot discharge, and

wherein the following three equations are satisfied:

$$T_1 = k_1 \times N \times Tr/2$$

$$T_2 = k_2 \times Tr/2$$

$$K_{12} = k_3 \times (3Tr/4 - T_2/2), \text{ for } k_1, k_2, \text{ and } k_3 \text{ each ranging from } 0.9 \text{ to } 1.1, \text{ where } N$$

denotes an odd number ~~more~~ greater than ~~one~~ 3, Tr denotes an inverse of the a hydrodynamic resonant frequency of the liquid discharge head, T_1 denotes the a pulse width of the first

discharge pulse, T_2 denotes ~~the~~ a pulse width of the second discharge pulse, and K_{12} denotes ~~the~~ a rest time between the first discharge pulse and the second discharge pulse.

4. (Currently Amended) A ~~driving patterning method for a liquid discharge head~~ according to claim 3, wherein the liquid discharge head further comprises a driving circuit, the driving circuit applies a non-discharge pulse, in response to which liquid is not discharged, subsequently to the second discharge pulse, and the following equations are satisfied:

$$T_3 = k_4 \times Tr/2$$

$K_{23} = k_5 \times (3Tr/2 - T_2/2 - T_3/2)$, for k_4 ranging from 0.2 to 0.5 and k_5 ranging from 0.9 to 1.1, where T_3 denotes ~~the~~ a pulse width of the non-discharge pulse, and K_{23} denotes ~~the~~ a rest time between the second discharge pulse and the non-discharge pulse.

5. (Currently Amended) A ~~driving patterning method for a liquid discharge head~~ according to claim 3, further comprising a step of supplying a driving signal including the first discharge pulse and the second discharge pulse to liquid discharge heads, the liquid discharge heads forming a liquid discharge head group having a plurality of ~~the~~ discharge ports, a plurality of ~~the~~ pressure-applying portions, and a plurality of ~~the pressure-generating~~ pressure-generating devices, wherein the pulse T_1 width of the first discharge pulse, the pulse width T_2 of the second discharge pulse, and the rest time K_{12} have the same value.

6. (Currently Amended) A ~~driving~~ patterning method ~~for comprising the steps of:~~
~~preparing~~ a liquid discharge head ~~including: comprising~~ a discharge port for
discharging ~~liquid;~~ liquid, a pressure-applying portion communicating with the discharge port,
for applying a pressure for discharge to ~~the liquid;~~ liquid, and a ~~pressure-generating~~
~~pressure-generating~~ device for generating the ~~pressure~~, ~~the method comprising a driving circuit~~
for pressure; and

applying liquid to a liquid-receiving member supported on a support by driving
the liquid discharge head,

wherein said step of applying liquid comprises a step of applying a first discharge
pulse for discharging liquid and a second discharge pulse for discharging liquid to the ~~pressure~~
~~generating~~ pressure-generating device in a sequential manner in response to an instruction of
one-dot discharge, and

wherein the following three equations are satisfied:

$$T_1 > T_r$$

$$T_2 = T_1/2$$

$$K_{12} = 3T_1/2N - T_2/2,$$

where N denotes an odd number ~~more~~ greater than ~~one~~ 3, T_r denotes an inverse of
~~the~~ a hydrodynamic resonant frequency of the liquid discharge head, T_1 denotes ~~the~~ a pulse
width of the first discharge pulse, T_2 denotes ~~the~~ a pulse width of the second discharge pulse,
and ~~K12~~ K_{12} denotes ~~the~~ a rest time between the first discharge pulse and the second discharge
pulse.

7. (Currently Amended) A ~~driving patterning method for a liquid discharge head~~ according to claim 6, wherein the liquid discharge head further comprises a driving circuit, the driving circuit applies a non-discharge pulse, in response to which liquid is not discharged, subsequently to the second discharge pulse, and the following equations are satisfied:

$$T_3 < T_r/2$$

$$K_{23} = 3T_1/N - T_2/2 - T_3/2,$$

$$\underline{K}_{23} = 3T_1/N - T_2/2 - T_3/2,$$

where T_3 denotes ~~the~~ a pulse width of the non-discharge pulse, and ~~K₂₃~~ \underline{K}_{23} denotes ~~the~~ a rest time between the second discharge pulse and the non-discharge pulse.

8. (Currently Amended) A ~~driving patterning method for a liquid discharge head~~ according to claim 6, further comprising a step of supplying a driving signal including the first discharge pulse and the second discharge pulse to liquid discharge heads, the liquid discharge heads forming a liquid discharge head group having a plurality of ~~the~~ discharge ports, a plurality of ~~the~~ pressure-applying portions, and a plurality of ~~the pressure-generating~~ pressure-generating devices, wherein the pulse width \underline{T}_1 of the first discharge pulse, the pulse width \underline{T}_2 of the second discharge pulse, and the rest time \underline{K}_{12} have the same value.

9-14. (Canceled)